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AUTHOR Anderson, D. Michael; Morosco, Gregory J.
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ABSTRACT

This guide was written for physicians who might be interested in working with school-aged children in the area of tobacco use intervention. It briefly describes the physician's role in providing health education to students in the school setting and notes the effectiveness of health education in the schools in reducing the number of students who start smoking. Statistics are provided on the number of children who smoke, age of onset, and types of tobacco use. The schools are recognized as an excellent site for reaching children from all social and ethnic groups. Prevention strategies discussed include the physician spending time in the classroom; working to form a school health education advisory committee; encouraging the planning, implementation, and evaluation of anti-tobacco efforts; promoting teacher in-service training; and using other planning resources. Skill development, peer leadership, and family involvement are cited as important criteria to consider in choosing a school's anti-tobacco curricula. Physicians are provided with several step-wise strategies to use when speaking to children and adolescents about tobacco use. The guide concludes with a sample of curricula available for smoking intervention in school settings. The curricula are grouped by grade level and are accompanied by a short statement on age-appropriate developmental characteristics. (NB)

National Heart, Lung, and Blood Institute
Office of Prevention, Education, and Control
Smoking Education Program
National Institutes of Health
Bethesda, Maryland 20892

D. Michael Anderson, Ph.D., M.P.H.
Youth and School Health Specialist

Gregory J. Morosco, Ph.D., M.P.H.
NHLBI Smoking Education Program Coordinator

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It is abundantly clear from all we know about the short- and long-term health consequences of cigarettes and smokeless tobacco, that the best choice an individual can make is to never start. It follows that a critically important group to focus tobacco use prevention and intervention efforts upon is young people. With children and adolescents we have the opportunity to promote healthy lifestyles as they are being established. While increased rates of cardiovascular disease and several other risks associated with cigarette smoking are generally not manifest until later stages of life, it is in youth that people start smoking, and begin to experience the health consequences of tobacco use. Once smoking becomes a habit in adolescence, it evolves into the familiar, difficult behavior pattern to break. Studies show that nearly two-thirds of those who have ever smoked on a daily basis began smoking by age 14 or earlier. And while rates appear to be declining, a national survey demonstrated that more than 19% of the high school class of 1985 were daily smokers

There is also evidence to show that many young people are now using smokeless tobacco. This habit includes various types of snuff use, called dipping, and chewing tobacco. In some areas of the U.S., 20 to 40 percent of adolescent males have tried these products, and in some areas the figure is much higher. Their use may lead to cancers of the mouth and damage to teeth and gums, plus all the problems associated with nicotine such as increased heart rate and addiction.[2]

Fortunately, schools offer an excellent site where we can reach children from all social and ethnic groups. An estimated 95% of all American children are enrolled in school. It is not surprising that many health professionals consider schools to be the primary site for influencing children about factors that contribute to their health.[3]

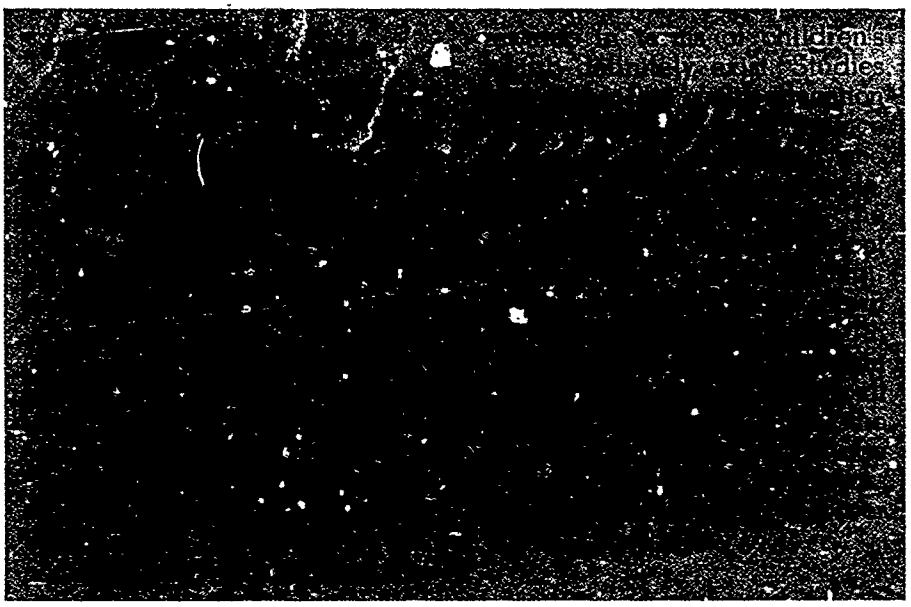
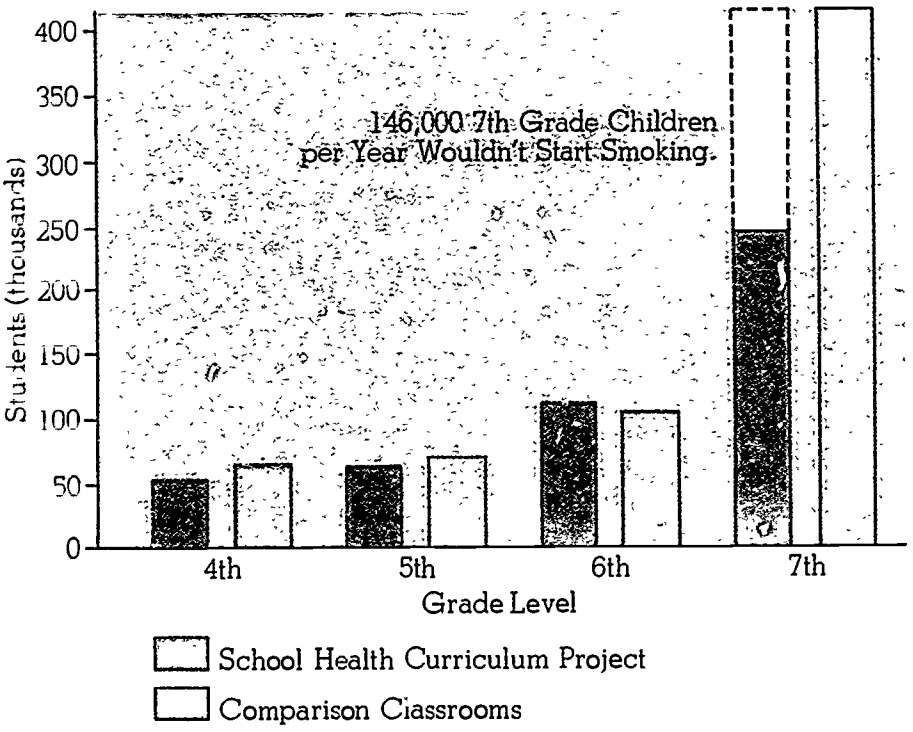


Table 1
Comprehensive School Health Education Makes a Difference
Estimates of Number of Children Who Smoke



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Action Steps

1.
Spend some time in a classroom.

Children name physicians as second only to their parents as the person from whom they learn the most about health. Adolescents also regard physicians as a credible source of health information.[5] Most schools and teachers would welcome a physician willing to spend some time talking to students about tobacco avoidance. You can introduce students to a medical perspective and respond to questions their teachers do not have the background to answer. Contact your local voluntary agencies for materials (see "Materials Available") you can use to get started.

2.
Form a school health education advisory committee.

You will probably find it advantageous to form a program advisory committee to help bring together several elements of support for school health. It is best to keep the committee small, with representatives from these or other appropriate groups:

- Parents
- Students
- School board members
- School administrators
- Teachers
- Principals
- School nutritionist
- PTA's & PTO's
- School nurse
- Private physicians & dentists
- State health & education officials
- Voluntary health agency members
- University advisors
- School guidance counselors
- Community leaders
- Religious organizations

There are probably several organizations or individuals in your community already involved in smoking or school health. Drawing upon their experience and forming coalitions is one of the most effective strategies for promoting health education.

3.
Encourage planning, implementation, and evaluation of anti-tobacco efforts.

This involves helping education officials, from the school board and administration on through to the staff, to take an active interest in anti-tobacco education, and encouraging them to provide adequate resources for a successful effort. Work through the school health advisory committee to take the following actions:

a. Assess current activities in tobacco use education, and determine where improvements are needed.

b. Develop specific and measurable educational goals and objectives.

c. Plan educational activities as needed, whether this involves a re-commitment to materials currently in use, or adoption of new curricula.

d. Plan for evaluation of your efforts in terms of how well recommendations are implemented, and if possible, effects on students' knowledge and behaviors.

4.
Promote teacher in-service training.

Unfortunately, many teachers are inadequately prepared in the content and objectives of contemporary, behaviorally-focused health education. Yet it is not surprising that studies indicate health education works best when teachers receive adequate training and material support.[6] In-service training provides a foundation for health teaching, and training efforts can be enhanced by the contribution of medical care professionals, as well as informed members of the community. Encourage administrators to arrange adequate time and resources for teacher training. Working to improve teachers' skills may be the most far-reaching action you can take.

5.
Use other planning resources.

You may want further help in your planning efforts. The American School Health Association (ASHA) has prepared a useful health marketing kit, with accompanying slide series, called *A Healthy Child: The Key to the Basics.* It includes planning guidelines, program ideas, statistical support, media materials, evaluation forms, and a bibliography. The kit also includes two pamphlets, "Why Health Education" and "Physician's Guide to the School Health Curriculum Process," both prepared by the American Medical Association. These materials may be obtained for a small charge by contacting:

American School Health Association
P.O. Box 708
1521 South Water Street
Kent, OH 44240
(216) 678-1601

Use the Most Effective Health Education Methods

There are many good curricula available through government, voluntary, and private sources. To help facilitate your school's choice of anti-tobacco curricula, emphasize a few important criteria:

1. Skill-development

Knowledge about the health risks of tobacco is important, but knowledge alone is not sufficient to prevent an individual from using cigarettes or smokeless tobacco. For instance, virtually all adolescents know that cigarettes are harmful, yet many start smoking anyway.[7] Make sure that educational interventions include a skill-development component to help students learn how to resist pressures to smoke, dip, or chew.

2. Peer leadership

Peer modeling is probably the most important factor in choosing to use tobacco.[8] Just as those who wish to belong to a group of peers who smoke or dip are likely to use cigarettes or snuff, those whose peers are non-users are likely not to be users. Successful health education efforts use this to their advantage by incorporating peer-led activities, especially with adolescents.

3. Family involvement

Family smoking habits also have a strong influence on the smoking behaviors of children. Seventy-five percent of all children who smoke come from homes where at least one parent smokes.[9] The best educational interventions include provisions for involving parents. If direct participation is not possible, parents can at least take part in homework assignments.

Behavioral Prescriptions

When speaking to children and adolescents about tobacco use, there are several step-wise strategies that you can use.

With Children:

1.
Promote never starting
Build upon the fact that virtually all children do not want to become smokers, and that the best way to achieve this is to never start.

2.
Discuss health consequences
Describe diseases such as cancer, emphysema, and heart disease, as well as the addictive nature of nicotine.

3.
Show-up advertisements
Share a few smoking advertisements with students and point out how the ads make cigarettes seem fun and sophisticated, but do not show their harmful effects.

4.
Create an environment
Point out all the places such as your office, restaurants, schools, stores, and other public places that do not allow cigarette smoking in your area.[10] Point out that there is virtually no place that allows dipping.

With Adolescents:

1.
Discuss immediate effects
Emphasize the immediate effects of tobacco use. For self-conscious teens, smelling like smoke, and having bad breath and nicotine stains discourages smoking, dipping, and chewing.

2.
Anticipate peer influences
Rehearse how to say no to situations where peer pressure influences behavioral choices.

3.
Promote alternatives
Encourage participation in activities such as exercise or other social activities that are incompatible with tobacco use.

4.
Give reinforcement
Have students develop contracts or other forms of intent not to smoke or dip, and periodically remind them of their promise. A word or letter from you can be a powerful reinforcer. Consider writing a behavioral prescription to emphasize remaining tobacco-free.[11]

Developmental Factors

Because of the many developmental changes that occur between infancy and adolescence, consideration when implementing health education interventions for children should be given to cognitive and psychosocial development. Cognitive development is crucial to a child's ability to understand health and illness, and the relationship between behavior and health. Psychosocial development is an important aspect of a child's ability to assume responsibility for his or her own health-related behavior.[12]

Studies have shown that very young students can be taught health-related factual information, and that children as young as age 7 or 8 years can be taught health decision making skills.[13,14] Upper elementary aged children may be greatly influenced by authority figures such as parents and teachers. Yet, while adults dominate their lives by granting permission and privileges, children at this age are becoming aware of how to act grown-up, and they do so to impress their peers. Peers become an increasingly important source of information for preadolescents, and are used as standards against which the child compares him or herself. By age 8 or 9, peers' role as models of behavior, as well as social approval or disapproval, can become as important as that of the family. After 10 or 11 years and into adolescence, peer influence often becomes even more important, resulting in conflict with family values, and challenges to parental authority.[15,16]

These factors generally result in preadolescents forming strong negative and moralistic attitudes toward tobacco use. Teenagers, on the other hand, tend not to condemn smoking in such absolute terms. As children move into adolescence, they become more relativistic and tolerant, and this leads to questions about previous limits on their behavior. This questioning, when combined with exposure to prestigious role models and social pressure toward conformity, sometimes leads to experimentation with tobacco.[17]

Materials Available

The following is a sample of curricula available for smoking intervention in school settings. They are grouped by grade, and accompanied by a short statement on age-appropriate developmental characteristics. The list is by no means comprehensive. Many other curricula exist, and development of new materials is an on-going process.

Grade: K-3

Characteristics of Intellectual Development
At this age (4-7 years), conclusions are based on vague impressions and perceptual judgments. These children see health as a series of specific actions such as drinking milk or eating vegetables. Health is something that enables them to play and be outside or with their family. Because their thinking is in absolutes, they see things as either good or bad for their well being. Anti-tobacco use interventions should concentrate on simple and unambiguous presentations of fact.

Appropriate Materials

Octopuff in Kumquat (American Lung Association)
This is a 9-minute animated film designed to encourage students to think about problems associated with cigarettes. An accompanying teacher's guide to supplementary activities is available.

An Early Start to Good Health (American Cancer Society)
A series of lessons designed to promote health enhancing behaviors for young students. Designed to be followed by ACS Health Network for upper elementary students.

Lungs Are For Life (American Lung Association)
This set of teachers' materials focuses on smoking, air pollution, and lung physiology. Separate materials including teachers' guides, spirit masters, and posters, are available for kindergarten through fourth grade.

Grade: 4-6

Characteristics of Intellectual Development
Most children at this age (7-12 years) are capable of logical application of information, so long as it is not too abstract. Health concerns expand to include overall body states such as being in good shape and feeling good, especially as these relate to performance of physical activities. Preadolescents are usually capable of seeing a range of health-related possibilities between good and bad, and are beginning to understand that actions taken now can have effects in the future. Antismoking interventions should contain exercises in which students practice decision-making skills.

Appropriate Materials

Healthy Decisions (American Cancer Society)
This program consists of software and users' manuals, help cards, and leaders' guides, and focuses on improving health decision-making skills.

Let's Talk About Smoking (American Heart Association)
This evaluated module is designed to make students aware of the pressures to smoke, and teaches them skills to resist these pressures at an age when many are beginning to experiment with cigarettes.

ACS Health Network (American Cancer Society)
This program is designed as a followup series to *An Early Start to Good Health.* It is designed to promote overall positive health behaviors.

Be A Winner: Smokeless Tobacco Program (American Cancer Society, Ohio Division)
Materials include student pamphlet, educator presentation, fact sheets, behavioral contracts, activity sheets, stickers, and posters.

Grade: 7-12

Characteristics of Intellectual Development
By this age (12+ years), most individuals are evolving the capacity for logical and abstract thought, drawing conclusions, making interpretations and developing hypotheses. Adolescents see health as feeling good, and as the ability to participate in desired activities. Health is also seen as something involving the body, mind, and environment, and that it takes place over time throughout life. Anti tobacco programs can therefore be multi-factorial, but because of the strength of peer and other influences they should remain present oriented, emphasizing immediate benefits of not smoking or dipping.

Appropriate Materials

Save a Sweetheart (American Heart Association)
Aimed at preventing teenage smoking, this 11-week program uses information about the physical effects of smoking and incorporates peer influence to encourage nonsmoking behavior. Lessons include marketing, sociological, and psychological techniques similar to those used by tobacco companies.

Biofeedback Smoking Education Program (American Lung Association)
This program uses laboratory devices and lecture sessions to emphasize the immediate physical effects of cigarette smoke. Biofeedback equipment monitors skin temperature, pulse, and muscle tremors that follow smoking a cigarette.

Smokeless Tobacco (American Dental Association and American Cancer Society)
This is a 12-minute rock and roll music video that addresses smokeless tobacco use.

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